P24

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,769	05/30/2000	Arup Acharya	YOR9-2000-0240-US1	1900

7590 10/27/2003

Louis P Herzberg Intellectual Property Law Dept
IBM Corporation
P O Box 218
Yorktown Heights, NY 10598

EXAMINER	
TRAN, TONGOC	
ART UNIT	**PAPER NUMBER**
2134	3

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/580,769	ACHARYA ET AL.	
	Examiner	Art Unit	
	Tongoc Tran	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This office action is in response to applicants' application filed on 09/580,769 filed on 5/30/2000.

Specification

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 3, 8, 11-12, 14-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Ylonen et al. (U.S Patent No. 6,438,612).

5. In respect to claims 1, 3, 11-12 and 14-21, Ylonen discloses a method, an apparatus, a computer program and a computer usable medium having computer readable program code means to validating establishment of at least one IP communication tunnel, comprising:

"validating that transformation from an originator of a validation process have been established properly" (see col. 10, lines 10-28); and

"requesting that at least one other participant in the tunnel validate that the transformation from the participant have been established property" (see col. 3, lines 15-30 and col. 10, lines 10, lines 10-17); and

"verifying that at least one participant in the tunnel can communicate with the originator of the validation process" (see col. 10, line 65-col. 11, line 3).

"establishing a device level socket at the originator" (see col. 10, lines 50-65).

6. In respect to claim 8, Wray discloses a method as recited in claim 1. Wray further discloses:

"wherein the IP communication tunnel uses the IP-security protocols established using the Internet key exchange" (see col. 4, lines 39-47).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ylonen (U.S. Patent No. 6,438,612) in view Rosen (U.S. Patent No. 6,337,861).

9. In respect to claim 2, Ylonen discloses a method as applied to claim 1. Ylonen discloses sending an IP packet on the communication tunnel and validate that the transformations were done properly (see col. Col. 3, lines 15-30 and col. 10, lines 10-17) but does not explicitly discloses a predetermined value of time-to-live field set in an IP header and receiving an ICMP message generated by the network in response to the sent IP packet and examining the content of the ICMP message to validate that the transformation are done properly However. However, Rosen discloses sending an IP packet with a predetermined value in a time-to-live field (see col. 5, lines 8-25); and receiving an ICMP message generated by the network in response to the sent IP packet (see col. 5, lines 27-42); examining the contents of the ICMP message to validate that the transformations were done properly (see col. 1, lines 60-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an IP header with a predetermined value of time-to-live field to set as desired in order to control the number of times the packet is being forwarded to determine the condition of the network transfer and generating an ICMP messages in response to sent IP packet for the benefit of reporting error in data transmission.

10. Claims 5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ylonen (U.S. Patent No. 6,438,612) in view of Applicants' admitted prior art.

In respect to claim 5, Ylonen discloses a method as applied to claim 1. Ylonen does not explicitly discloses:

"the IP communication tunnel uses Generic Routing Encapsulation as the transformation". However, as Applicants' admitted prior art discloses Generic Routing Encapsulation (GRE) is well known in the art for data transformation (see page 3, lines 1-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement GRE technique for the data transformation for the benefit of encapsulating non-IP traffic into an IP and send it over the Internet or IP network.

11. In respect to claim 9, Ylonen discloses a method as applied to claim 1. Ylonen does not explicitly discloses:

"wherein the IP communication tunnel uses IP compression as the transformation". However, Applicants' admitted art has discloses IP compression is old and well known (see page 1, line 23 – page 2, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement IP compression for the benefit of reduce the size of the packet for faster data transmission.

12. In respect to claim 10, Ylonen discloses a method of claim 1. Ylonen does not discloses:

"wherein the IP communication tunnel uses network address translation as the transformation". However, Applicants' admitted art has discloses that address translation is well known in the art for data transformation (see page 3, lines 1-17). Therefore, it would have been obvious to one in the ordinary skill in the art at the time

the invention was made to transform data using address translation for better privacy protection.

13. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ylonen (U.S. Patent No. 6,438,612) in view of Ohba et al. (U.S. Patent No. 6,501,760).

14. In respect to claim 6, Ylonen discloses a method as applied to claim 1. Ylonen further discloses:

"configuring a router to filter a subset of packets (see col. 3, lines 15-30);

examining the filtered packets to validate that the transformation has been done properly" (see col. 10, lines 10-17). Ylonen does not explicitly disclose generating IP packets with markings on the communication tunnel. However, Ohba discloses providing IP packets with marking on the communication tunnel (see col. 11, lines 25-39 and lines 43-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ylonen and Ohba by providing the marking to prevent transmission congestion as an indication of priority bit region for the purpose of priority control as taught by Ohba.

15. In respect to claim 7, Ylonen discloses a method as recited in claim 6. Ylonen further discloses:

"used for validation of a partial route transformation" (see col. 10, lines 10-27).

16. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ylonen (U.S. Patent No. 6,438,612) in view of Grosser Jr. et al. (U.S. Patent No. 6,473,798).

17. In respect to claim 4, Ylonen discloses a method as applied to claim 1. Ylonen further discloses sending an IP packet on the communication tunnel to the participant with the address of a participant in the tunnel and receiving the IP packet after the transformation have been applied (see col. 2, lines 35-38); and examining the content of the packet to validate that the transformation were done properly (see col. 10, lines 10-27). However, Ylonen does not explicitly disclose examining (testing) the contents to validate that transformations were done properly in the tunnel. However, Grosser discloses establishing a tunnel testing between two devices (see Fig. 1 and col. 7, lines 49-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to establish an interface between the source and the destination devices to perform communication testing before sending the actual IP packet to ensure that packet is safely arrived its intended destination.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Ranganathan et. al. disclose discovery of acceptance packet size using ICMP echo.

-Crichton et al. disclose a method and apparatus for lightweight secure communication tunneling over the Internet.

-Redlich discloses an IP network access for portable devices.

-Araujo et al. disclose distribution of protocol process from network elements to end stations.

-Khalil et al. disclose reduced overhead tunneling technique having mobile foreign agents.

-Albert et al. disclose dispatching packets from a forwarding agent using tag switching.

-Leung discloses a mobile IP intra-agent mobility.

-Leung discloses a mbile IP dynamic home address resolution.

-Yuan discloses system and methods for internetworking data networks having mobility management functions.

-Heer et al. disclose encrypting method and apparatus enabling multiple access for multiple serviceand multiple transmission modes over a broadband communication network.

-Leung et al. disclose methods and apparatus for providing mobility of a node that does not support mobility.

-Shrader discloses web-based administration of IP tunneling on Internet firewalls.

-Bullard discloses system for requesting missing network accounting records if there is a break in sequence numbers while the records are transmitting from a source device.

-Arndt et al. disclsoe method and detecting proxy ARP replies from devices in a local area network.

Leung discloses mobileIP mobility agent standby protocol.

Geer, Jr. et. al. disclose certifying authorization in computer networks.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tongoc Tran whose telephone number is (703) 305-7690. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9600.

Examiner Tongoc Tran
Art Unit: 2134

TT
October 2, 2003

Matthew B. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2134